

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--COMPATIBILITY OF FUNGICIDES WITH INSECTICIDES -U-
AUTHOR-(03)-SEDYKH, A.S., SHAPOVALOVA, G.K., ABELENTSEVA, G.M.
COUNTRY OF INFO--USSR
SOURCE--KHIM. SEL. KHOZ. 1970, 8(2), 114
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--FUNGICIDE, INSECTICIDE/(U)SEVIN INSECTICIDE, (U)ANTHIO
INSECTICIDE, (U)PHOSALONE INSECTICIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0319 STEP NO--UR/0394/70/008/002/0114/0114
CIRC ACCESSION NO--APJ113245
UNCLASSIFIED

USSR

POPOV, P. V., et al., *Khimiya v Sel'skom Khozyaystve*, Vol 8, No 9, (83), Sep 70, pp 39-40

it was found that after spraying, residues amount to 7.5% mg/kg, which decreases after 17 days to 1.96 mg/kg. About 20% of the total residue is found in the stem depression and the sepal. These residues were not washed from the fruit even though there was some rainfall over the 17-day period. On the other hand, the residues on the surface of the fruit (80% of the initial total) were reduced by 90% over the 17-day period (from 6.1 mg/kg to 0.4-0.5 mg/kg).

USSR

UDC 632.951

POPOV, P. V., SEDYKH, A. S., ABELENTSEVA, G. M., All-Union Scientific Research Institute of Chemical Agents for Plant Protection

"Determination of Phthalophos Residues in Apples"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 9, (83), Sep 70, pp 39-40

Abstract: The authors determined residues of the DDT substitute phthalophos (O,O-dimethyl-S-phthalimidomethyldithiophosphate) on apples under laboratory and field conditions. In laboratory tests, the apples were immersed in a 0.1% emulsion of phthalophos for a few seconds and stored in the suspended state. After four days, the residue of phthalophos was washed from the fruit by immersion for 2-3 seconds in acetone. The apples were then peeled with removal of a small amount of flesh, and the phthalos residue was extracted by acetone from the peeling and the remaining flesh. The results of analysis showed that nearly all the phthalophos residue was on the surface and in the skin of the apples with only 0.06 mg/kg or 2% of the total in the fleshy part of the fruit. Under field conditions

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USSR

UDC 630.954.01.01.01

SEDYKH, A. S. and ~~MELENISEVA~~, G. M., All-Union Scientific
Institute of Chemical Substances for the Protection of Plants

"Removal of Insecticide Residues from Fruit Intended for Consumption"

Moscow, Khimiya y Sel'skoy Khozyaystva, Vol. 9, No. 3, 1978, p. 43

Abstract: Removal of phosphorus-containing insecticide residues from apples and pears was studied. Apples were submerged for several seconds into a 0.1% emulsion (experiment 1) and into a 0.1% suspension of phthalic acid (experiment 2). After drying for one hour in air, one fruit was washed for 15 min. under running water, another fruit was submerged for 15 sec in 0.1% hydrochloric acid, a third one was not at all processed. Subsequently all fruits were dried in air and submerged in acetone for 1 hr to dissolve phthalophos residues. The concentration of the latter in the acetone solutions was determined biologically by larvae of *Culex pipiens* *restuans*. Best results were observed with the fruit washed under running water with hydrochloric acid wash makes sense only to remove arsenic-containing insecticides, which are sparingly soluble in water and readily soluble in aqueous caustic soda. Inorganic phosphorus insecticides are poorly dissolved in pure water and even less readily in hydrochloric acid. It is recommended that for the removal of insecticide residues, the insecticides must be [chemically] broken down.

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USSR

SHAPOVALOVA, G. K., et al, Khimiya v Sel'skom Khozyaystve, Vol 8, No 8, Aug 70, pp 34-35

less than in control in the case of a single spraying before flowering, 6-12 times less after a single post-flowering spraying (similar results in the case of a double spraying). Residues were analyzed by thin-layer chromatography and the toxicological (biological) method. Residues of 1 mg/kg were detected by thin-layer chromatography in a weighed sample of 40-50 g, while none of the samples taken after a double spraying revealed residues. Residues not exceeding 0,2 mg/kg were found by the toxicological method on berries sprayed with a phthalophos suspension or emulsion, 0.7 mg/kg on berries sprayed with a benzophosphate emulsion.

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USSR

UDC 632.951

SHAPOVALOVA, G. K., SEDYKH, A. S., and ABELENTSEVA, G. M., All Union Scientific Research Institute of Chemical Plant Protectants

"The Effectiveness of Using Phthalophos and Benzophosphate Against the Gooseberry Fruit Worm and Residues of the Insecticides on Berries"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 8, Aug 70, pp 34-35

Abstract: In 1969 in the orchard of the "Otradnoye" training farm of the Timiryazev Agricultural Academy the authors tested a 20-percent emulsifiable concentrate of phthalophos (Imidan), a 50-percent wettable phthalophos powder and a 35-percent emulsifiable concentrate of benzophosphate (Phosalone) for controlling the gooseberry fruit worm, *Zophodia convolutella* Hb. The concentration of the insecticides was 0.1 percent, a. i. Gooseberry shrubs were sprayed once (before flowering, 13 May, or a week after flowering, 30 May) or twice, 13 and 30 May. The sprayings were liberal, until the liquid was dripping off the leaves. The effectiveness of treatment was determined 7 July, about two weeks before picking, and the residues of the insecticides on the berries 12 July. The injury to berries by caterpillars on control unsprayed bushes was 12.7 ± 1.9 percent. The berry injury was 3.5-4 times
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USSR

UDC 632.95

ABELENTSEVA, G. M., SEDYKH, A. S., ORLOVA, V. I.

"Sensitivity of the Biological and Thin-Layer Chromatographic Methods of Determining Pesticides"

Tr. 2-go Vses. soveshch. po issled. istatkov pestitsidov i profilakt. zagryazneniya imi produktov pitaniya, kornov i vnesh. sredy (Works of the Second All-Union Conference on Investigation of Residues of Pesticides, and Prevention of Pesticide Contamination of Foodstuffs, Fodder and the External Environment), Tallinn, 1971, pp 331-334 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N406)

Translation: The biological method using mosquito larvae is 6700, 152 and 227 times more sensitive for determination of residues of Dursban, DDVP and chlorophos respectively than the method of thin-layer chromatography in a fixed layer in the hexane - acetone system (4:1 or 1:1) (developer; bromophenol blue with AgNO_3). The sensitivity of these methods is almost the same for sayfos and phosphamide. In most instances the biological method does not require purifying extracts of contaminating substances.

USSR

POPOV, P. V., et al., Khimiya v sel'skom khozyaystve, No 11, 1972, pp 34-37

The remaining 24 compounds, including phosalone, phthalophos, lindane and gardone were only half as effective as chlorophos. Considering such indexes of the compounds as their insecticidal nature, toxicity for mammals, stability of residues, duration of retaining the insecticidal qualities and the possibility of industrial production, it is necessary to consider phenitrothion, dilor and phenthion as most prospective for further study as means of controlling eurygaster.

USSR

UDC 632.951:632.734.1

POPOV, P. V., ABELENTSEVA, G. M., SEDYKH, A. S., Candidates of Agricultural Sciences, All Union Scientific Research Institute of Chemical Means of Plant Protection

"Contact Toxicity of Insecticides for Eurygaster"

Moscow, Khimiya v sel'skom khozyaystve, No 11, 1972, pp 34-37

Abstract: In order to discover some contact insecticides having advantages over methylnitrophos, propoksur, phenthion, morestane, trichlorometaphos-3, sevin, phthalophos, cydial, methylacetophos and ethoxyphos, a study was made of the compounds used in the Soviet Union and abroad against other pests and also some experimental compounds not used in practice for plant protection. The graphosoma of the species *Graphosoma italicum* Muell. and *G. Semipunctatum* F. is recognized and proved as the biological model of *Eurygaster integriceps* Put. suitable for toxicologic studies in the laboratory. Both species yielded 10-15 generations per year under laboratory conditions. Out of the 35 investigated insecticides, methaphos, phenitrothion, phenthion, carbofuran and sandos 52139 exhibited greater contact insecticide capacity than chlorophos; dichlorophos was equivalent to chlorophos, and dioxacarb, valexon, dilor and dursbane were only half as effective as chlorophos.

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USSR

UDC 632.951:633.11

ABELENITSEVA, G. M., and SEDYKH, A. S., All Union Scientific Research Institute
of Chemical Plant Protective Agents

"Phytocidal Activity of Insecticides on Wheat Sprouts"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 10 (120), 1973, pp 36-37

Abstract: Acute phytocidal activity of Chlorophos, metaphos, sumithione, metathione, methylnitrophos, phtalophos, and benzophosphate was investigated. The lowest activity was exhibited by chlorophos, benzophosphate, and phtalophos; the highest -- by metaphos, methylthiophos, metathione, and sumithione. Among the latter, the strongest phytocidal activity against wheat sprouts was shown by methylnitrophos.

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USSR

ABELENTSEVA, G. A., et al., Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 7, Jul 70, pp 35-36

influence on them of methylmercaptophos, methylnitrophos, methyl-ethylthiophos, phytios, phozalon and binapacryl.

Results of the experiments indicated that the spider mite females, the resistance of which to methyl-ethylthiophos, rogor and phoxime rose 93, 57 and 24 times, respectively, laid demonstrably less eggs than females of the population sensitive to these acaricides. The dynamics of larva hatching from eggs of both mite populations were approximately identical. The eggs of females in the resistant population were distinguished by high resistance to rogor.

USSR

UDC 632.354

ABELENTSEVA, G. A., and POPOV, P. V., All-Union Scientific Research Institute for Chemicals Means of Plant Protection, Moscow, State Committee for Chemistry USSR

"Study of the Fertility of the Female Spider Mite Population Resistant to Acaricides"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 7, Jul 75, pp 35-36

Abstract: Studies were conducted of the fertility of a female spider mite population resistant to acaricides. For the experiments, the resistant R_{gen} population of the red spider mite (*Tetranychus urticae* Koch.) was taken from a greenhouse in which for many years methylethylthiophos was used intensively against the mites. Laboratory tests indicated that the evolved population was 93 times more resistant to methylethylthiophos than the standard sensitive population S. In application of methylethylthiophos, the cross-resistance of mature mites of the R_{gen} population to rogor (dimethoate), phoxime, gardon, amiphos and methylmercaptophos rose 57, 24, 12, and 7 and 6 times, respectively. The R_{gen} and S populations were used to determine fertility of the mites and viability of the eggs with and without 1/2

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125023

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. MANEB IN 0.05PERCENT AQ. SOLN. USED ON TOBACCO SPROUTS AND UP TO 0.25PERCENT ON SEEDLINGS WAS EFFECTIVE AGAINST PERONOSPORA TABACINA. ZINEB, POLYCARBAZINE, AND PYRAM IN 0.25PERCENT AQ. SOLNS. WERE EFFECTIVE ONLY IN THE LATE PERIOD OF SEEDLING GROWTH. FACILITY: VSES. NAUCH.-TSSLED. INST. KHIM. SREDSTV ZASHCH. RAST., MOSCOW, USSR.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--EFFECTIVENESS OF THE USE OF DITHIOCARBAMATES TO COMBAT THE
PERONOSPOROSIS OF TOBACCO IN VARIOUS PHASES OF SEEDLING FORMATION -U-
AUTHOR-(03)-ABELENITSEV, V.I., GOLYSHIN, N.M., DVUKHSHERSTOV, M.G.

COUNTRY OF INFO--USSR

SOURCE--KHIM. SEL. KHOZ. 1970, 8(2), 117-18

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THIOCARBAMATE, PLANT DISEASE, DISEASE CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--2000/1375

STEP NO--UR/0394/70/006/007/0117/0110

CIRC ACCESSION NO--AP0125023

UNCLASSIFIED

USSR

UDC 632.95

GOLYSHIN, N. M., ABELENTSEV, V. I., DVUKHSHERSTOV, H. G., MEL'NIKOV, N. N.,
VOLODKOVICH, S. D., TRUNOV, P. P., DYMSHAKOVA, G. H., NOVIKOVA, V. A.

"Fungicide Mix"

USSR Author's Certificate No 250600, filed 28 Mar 68, published 16 Jul 71 (from
RZh-Khimiya, No 6 (II), Jun 72, Abstract No 68624)

Translation: Ethylenethiurandisulfide (13-40%) is added to a fungicide
mix containing ethylenebisdithiocarbamates of Zn (36-55%) and Mn (20-35%)
for simultaneous control of several plant diseases. The preparation can be
used for preplant treatment of the seed of bean and vegetable crops with con-
sumption norms of 6-10 grams/kg of feed.

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USSR

UDC 632.95

HEL'NIKOV, P. N., SOKOLOVA, YE. M., TRUNOV, P. P., VOYAKOVICH, S. D.,
 DYUBHAKOVA, G. N., GOLYBRIK, N. M., ABLETSOVA, V. I., GILYAS, M. S.,
 PEDCHENKO, L. G., SALKIN, B. A., DVURCHENKOV, M. G., VISHNEVSKAYA, A. N.,
 ORLOV, S. I., ZAVIZICH, A. P., and TALASH, A. I.

"Polycarbazin"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants -- collection of works), vyp 1, Moscow, 1970, pp 95-104 (Izv KHKh-Khimiya, No 13, 10 Jul 72, Abstract No 13N353 by T. A. Belyayeva)

Translation: The effectiveness of polycarbazin (I) on apple scab and grapevine mildew equals that of zineb (II) and polyars-combi, while on cherry-fruit gray rot it equals Bonleaux liquid (III) (1 percent), but is ahead of II. I equals II and III for Clasterosporium infection of the cherry plum and tomato microsporiosis. The decisive factor which determines the length of action of I is precipitation, which washes the preparation off plants.

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USSR

UDC 632.95

GOLYSHIN, N. M., FEDOSEYENKO, L. G., UKRAINEIS, N. S., ABDELJESIN, V. I.,
and SOLOV'YEVA, G. V.

"Use of a Combined Preparation of Copper Oxychloride and Zineb"

V sb. Khim. sredstva zashchity rast. (Chemical Agents for Plant Protection --
collection of works), vyp 1, Moscow, 1970, pp 110-115 (from Khim-Khimiya,
No 11, Jun 72, Abstract No 11N428)

Translation: Mixtures of copper oxychloride and zineb in ratios of 1:1.5, 1:6
and 4:1 freshly prepared immediately before spraying had greater effectiveness
in controlling apple tree mangle and grape mildew than did the components
applied separately. The most effective was a mixture with a ratio of 1:1.5.
A mixture prepared with the same ratio of components as in Cuprosan Super
D was just as effective in field tests as the latter.

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USSR

UDC 632.95

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VOLODKOVICH, S. D., ANDREYEVA, YE. I., GOLYSHIN, N. H., PIVOVAR, V. I., KAPLAN, G. I., PRONCHENKO, T. S., USIRANOV, H. G., ABLENTSEV, V. I., DVOICHENKOVA, F. A., and SKAZHINA, T. P.

"Bromtan"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Pesticides -- collection of works), vyp 1, Moscow, 1970, pp 116-129 (from Khim-Khimiya, No 13, 10 Jul 72, Abstract No 134591 by T. A. Belyayeva)

Translation: The preparation bromtan ($\text{BrCCl}_2\text{CHBrCH}_2\text{CH}_2\text{CH}_2\text{Cl}$) (I) is being tested as a soil fungicide and antiseptic for nonmetallic materials. I is as effective as carbendazim in the control of Nelson fusarial wilt. I in a concentration of 0.8 percent is equivalent to DBOC in an 0.6 percent concentration with respect to eliminating forms of the causative agent of apple scab and brown rot. I is active in the control of cotton root rot and wilt at a consumption rate of 100-100 kg/ha.

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USSR

UDC 632.95

PYATKOVA, YU. B., GOLUBEVA, V. A., GOLYSHIN, N. M., ~~UKRAINETS, M. S.~~
~~ABELENTSEV, M. I.~~, FEDOSENKO, L. G., VISHNEVSKAYA, A. M., PUSTOVOTOVA, V. I.,
 and DVUKHSHNERSTOV, M. G.

"Editone"

Khim. sredstva zashchity rast. (Chemical Means of Protecting Plants -- collection of works), Issue 1-4, 1970, pp 129-134 (Referativnyy Zhurnal -- Khimiya, No 10, (II), 1972, Abstract No 10H550 by T. A. Belyayeva)

Translation: Investigation of editone -- 3,3'-ethylene-bis-4,6-dimethyltetrahydro-1,3,5-thiadiazin-2-one (I) -- in laboratory conditions in vitro showed that I is equivalent in fungicidal property to Phygon and offers no threat to green plants. The effectiveness of I in countering apple scab, grapevine mildew, cherry-plum Clasterosporium, nonilial blight, grey mold of cherry trees, and Macrosporium in tomatoes is equal to or exceeds the effectiveness of zineb and copper oxychloride (concentration 0.25-0.125%) and of Bordeaux mixture in 1% concentration. I is not effective in combatting powdery mildew.

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USSR

UDC 632.95

SHAPOVALOVA, G. K., SEDYKH, A. S., ABELENSHCHEVA, G. M., GALITSINA, V. V.,
and MARCHENKO, L. F.

"Insecticidal Action and Effectiveness of Phthalophos"

V sb. Khim sredstva zashchity rast. (Chemical Agents for Plant Protection ---
collection of works), vyp 1, Moscow, 1970, pp 8-14 (from RZh-Khimiya, No 11,
Jun 72, Abstract No 11N394)

Translation: Phthalophos in concentrations of 0.075-0.1% is an effective
substitute for DDT in controlling many pests of orchard, berry, vegetable,
commercial and fodder crops. Residues of the insecticide remain toxic
for pests for a shorter term than DDT. Phthalophos can be used with zinc
and copper oxychloride.

2/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136729

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CYTOGENETIC STUDY OF MONKEY HEMORRHAGIC FEVER SHOWED A DECREASE IN MITOTIC ACTIVITY AND AN INCREASE IN THE NUMBER OF DYING CELLS AND CELLS WITH PATHOLOGICAL CHANGES IN INFECTED MONKEY BONE MARROW. EXPERIMENTAL MONKEY HEMORRHAGIC FEVER WAS ACCOMPANIED BY AN INCREASE IN THE LEVEL OF CHROMOSOME ABERRATIONS IN BONE MARROW CELLS AND IN CULTURES OF PERIPHERAL BLOOD LEUKOCYTES. INJECTION OF CONCENTRATED VIRUS CONTAINING MATERIAL PRODUCED A HIGHER YIELD OF CHROMOSOME ABERRATIONS THAN INJECTION OF NATIVE MATERIAL. HEMORRHAGIC FEVER VIRUS INDUCED CHROMOSOME REARRANGEMENTS OF THE CHROMATIC TYPE, ANALOGOUS TO THOSE OBSERVED IN CONTROL CELLS DURING SPONTANEOUS MUTATION. THE OBSERVED INCREASE IN THE LEVEL OF CHROMOSOME ABERRATIONS IN MONKEY BONE MARROW CELLS DUE TO THE VIRUS INDICATES THE REAL VALUE OF THIS VIRUS IN INTENSIFYING THE MUTATION PROCESS IN SOMATIC TISSUES OF SENSITIVE TYPES. TWENTY MACACA RHESUS MONKEYS WERE INFECTED WITH HEMORRHAGIC FEVER VIRUS PASSAGED 21-24 TIMES IN MONKEYS. MONKEYS WERE INFECTED WITH BRAIN MATERIAL FROM SICK MONKEYS IN 1 ML AMOUNTS IN A TITER OF 10 PRIME3 ML (10 LETHAL DOSES) OR WITH MATERIAL CONSISTING OF 100 LETHAL DOSES. THE INCUBATION PERIOD OF THE DISEASE VARIED FROM 2-6 DAYS. FACILITY: INSTITUT EKSPERIMENTAL'NOY PATOLOGII I TERAPII, AMN SSSR, SUKHUMI.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--THE MUTAGENIC EFFECT OF VIRUSES. REPORT II. CYTOGENETIC STUDY OF
MONKEY HEMORRHAGIC FEVER -U-
AUTHOR--(05)-MARKARYAN, D.S., SHEVTSOVA, Z.V., KUKSOVA, M.I., MACHAVARIANI,
M.G., ABDZHIAN, M.V.
COUNTRY OF INFO--USSR
SOURCE--GENETIKA, 1970, NR 1, PP 144-150
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HEMORRHAGIC FEVER, VIRUS, MUTAGEN, MONKEY, BONE MARROW,
MITOSIS, CHROMOSOME
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/1371 STEP NO--UR/0473/70/000/001/0144/0150
CIRC ACCESSION NO--AP0136729
UNCLASSIFIED

USSR

KANCHATNOV, V. P. and ABDYUSHEV, SH. YA., Gigiyena Truda i Professional'nyye Zabolevaniya, No 12, 1972, pp 47-48

animals indicated a reduction of succinate dehydrogenase activity. It is concluded that all observed phenomena are results of central nervous system inhibitions expressed chiefly by changes in rheobase and chronaxie.

USSR

USC 613.645

KANCHATNOV, V. P., and ABDYUSHEV, SH. YA., Medical Institute imeni S. Kurashova, Kazan'

"Health and Hygiene Characteristics of Working Conditions and Some Biochemical Indices of Individuals Working in Darkness and Under Nonactinic Illumination"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 12, 1972, pp 47-48

Abstract: Metabolic changes in response to darkness and weak red light were studied among workers of a film processing shop following a normal work-day pattern and guinea pigs subjected to darkness all day (group 1), darkness for 6 hours during the day (group 2), and red light for 6 hours (group 3). Prolonged work in darkness caused an increase in cholinesterase activity (4.16 micromoles/ml/min vs. 2.77 in control) and blood bromine concentration (1.90 mg% vs. 0.56 in control). Group 2 animals demonstrated changes in redox processes and neuromuscular excitability, fluctuations in blood bromine level and cholinesterase activity, and an increase in hemoglobin and erythrocyte levels. For individuals working under red illumination, the coefficient of urine underoxidation, cholinesterase activity, and bromine level increased (respectively the levels were 6.49 vs. 1.63 in control, 4.21 micromoles/ml/min, and 1.14 mg%). A histochemical study of retinas from group 1 and 2

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USSR

UIC: none

ABDUZHAMILLOV, Sh., AZIMOV, S. A., SAIDKHANOV, N. Sh., and CHUDAKOV, V. M.

"Coherent Diffraction Generation of Ions by Protons in Photo-emulsive Nuclei"

Moscow, Yadernaya fizika, vol. 15, No 2, 1972, pp 300-312

Abstract: This paper is a study of reactions of the type $p + A \rightarrow A + N + n\pi$, in which a nucleus with an atomic number of A does not vary in charge and is not excited: i.e., coherent diffraction generation of ions by protons takes place. The results of experiments in which a stack of Ilford K5 emulsions was irradiated by neutrons with an impulse of 20.8 GeV/s, and 3550 m of primary proton traces were scanned at an average rate of 1 m/hr, are given in tabular form and analyzed. The irradiation of the emulsion in a strong magnetic field of about 180 kilogauss permitted measurement of secondary particle impulses with good accuracy. Angular correlations are investigated through the use of the Lorentz-invariant azimuthal angles, and a mechanism for the reaction given above is developed. The authors express their gratitude to M. I. Podgoretskiy for his comments.

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USSR

ABDUVAKHABOV, et al., Doklady Akademii nauk SSSR, No 5, 1973, pp 1209-1212

within each series of the inhibitors investigated are attributed to differences in the extent of sorption of the alkyl groups on the corresponding hydrophobic area. The latter appears to be in the region of the esterase center.

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- 7 -

USSR

UDC 577.133.4

ABDUVAKHABOV, ZUPAROVA, K. M., GODOLIKOV, N. N., KABACHNIK, M. I.,
KRASHENYUK, A. I., MIKHAYLOV, S. S., and ROZENGART, V. I., Tashkent State
University, Institute of Element-Organic Compounds, USSR Academy of Sciences,
and I. P. Pavlov First Leningrad Medical Institute

"New Hydrophobic Areas in the Region of the Esterase Center of Cholinesterases"

Moscow, Doklady Akademii nauk SSR, No 5, 1973, pp 1209-1212

Abstract: The anticholinesterase properties of three series of synthesized organophosphorus inhibitors with alkyl radicals of different lengths were studied in bovine erythrocyte acetylcholinesterase and horse serum butylcholinesterase. In the case of acetylcholinesterase, the compounds in which a methyl group was linked to the phosphorus atom exhibited the maximum inhibitory activity. Lengthening the alkyl radical either diminished their anticholinesterase properties or had no effect. With respect to butylcholinesterase, lengthening the alkyl radical in the inhibitors markedly increased their anticholinesterase activity. Compounds with cationic sulfur had the highest constants of the rate of inhibition because of the interaction of the positively charged sulfur atom with the anionic center of cholinesterase. The changes detected in the anticholinesterase properties

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USSR

UDC 340.67:615.285.7

IKRAMOV, L. T., TASHPULATOV, A. YU., and ABDUYAKHABOV, K. A.,
Tashkent Pharmaceutical Institute

"Reactions for Detection of Methylmercaptophos in Forensic Chemical
Analysis"

Moscow, Farmatsiya, Vol 19, No 6, Nov-Dec 70, pp 70-73

Abstract: It has been determined that methylmercaptophos (I) reacts specifically with mercuric chloride, mercuric bromide and iodine monochloride. Other structurally related pesticides failed to exhibit this specificity. To a drop of alcohol or water solution of I placed on a slide a drop of 2% aqueous solution of mercuric chloride is added and left standing for 15-20 min in a humidity chamber. Under microscope yellow microcrystals can then be observed. Sensitivity -- 0.8µg of (I) with a dilution of 1:50 000. This method can be used to analyze biological material, the sensitivity being 3 mg of (I) per 100 g of the biological material.

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USSR

UDC 1 947

ABDUVANKHABOV, A. A., ASLANOV, Kh. A., SADYKOV, A. S., and INOYATOVA, K.,
Tashkent State University imeni V. I. Lenin

"Lupinine Esters of O-Alkylmethylphosphonic and O,O-Diethylthiophosphoric
Acids"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 6, 1970, pp 771-772

Abstract: To determine anticholinesterase activity, the authors synthesized lupinine esters of phosphoric acids: O-ethyl-O-lupinanmethylphosphonate, O-n-butyl-O-lupinanmethylphosphonate, O,O-diethyl-S-lupinanthiophosphate, and iodomethylates of O,O-diethyl-S-lupinanthiophosphate and O-n-butyl-O-lupinanthiophosphonate.

USSR

UDC 947.94

TOREMURATOV, K., ABDUVAKHADOV, A. A., ASLANOV, Kh. A., and SADYKOV, A. S.,
Tashkent State Univeristy imeni V. I. Lenin

"New Phosphorus-Containing Esters of N(β -ethoxy)-anabasine and Lupinine"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 6, 1970, pp 772-773

Abstract: Phosphorus esters of N(β -ethoxy)-anabasine and lupinine are synthesized in a search for cholinolytics: (N(β -ethyl-0-diphenylphosphonyl)-anabasine, methylsulfomethylate of N(β -ethyl-0-diphenylphosphonyl)-anabasine, N(β -ethyl-0,0-isoamylmethylthiophosphonate)-anabasine, 0-diphenylphosphonyl lupinine, and iodomethylate of 0-diphenylphosphonyl lupine. Some of the physicochemical constants of these esters are tabulated.

1/1

USSR

UDC 542.91+541.69:547.1'118

ABDULAKHAROV, A. A., GODOVIKOV, N. N., KAEACHNIK, M. I., KRIVOROTOVA, L. S., MIKHAYLOV, S. S., and ROZENGART, V. I., Institute of Heteroorganic Compounds, Academy of Sciences USSR, and First Leningrad Medical Institute imeni I. P. Pavlov

"Reaction of O-n-Alkyl S-(β -ethylmercaptoethyl) Methylthiophosphonates and Their Methylsulfomethylates With Acetylcholinesterase"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 5, May 72, pp 1169-1172

Abstract: The authors studied the reaction of acetylcholinesterase with O-n-alkyl S-(β -ethylmercaptoethyl) methylthiophosphonates and their methylsulfomethylates to determine whether there is a hydrophobic site in the region of the esterase center of this enzyme. It was found that there is one hydrophobic site in the immediate vicinity of the esterase center of AChE, with alkyl radicals of the alkoxyl group sorbed at this site. The overall extent of this site corresponds to the n-butyl radical. The ability of these compounds to react with AChE depends to a considerable extent on their sorbability on the enzyme active surface, both through hydrophobic interactions and through ionic sorption.

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USSR

ABDUVAKHADOV, A. A., et al, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 7, Jul 73, pp 1659-1661

described in earlier work, formed the acid chlorides EtO(R)P(O)Cl (IV on being reacted with PCl_5 . IV, on being reacted with butylmercaptan and beta-mercaptodiethyl sulfide, yielded I and II, respectively. Compounds III were obtained by reacting II with dimethyl sulfate. The physical properties of the compounds synthesized are listed in tables.

USSR

UDC 542.91:547.1.118

ABDUVAKHAROV, A. A., ZUPAROVA, K. M., GODOVIKOV, N. N., KABACHNIK, M. I., ASLANOV, Kh. A., and SADYKOV, A. S., Institute of Organoelemental Compounds, Academy of Sciences USSR, and Tashkent State University imeni V. I. Lenin, Tashkent

"The Synthesis of Some O-Ethyl-S-alkyl Alkylthiophosphonates"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 7, Jul 73, pp 1659-1661

Abstract: It was established in earlier work by the authors that the anticholinesterase activity of O-alkyl-S-alkyl methylthiophosphonates increases with an increasing length and degree of branching of the alkyls at O and S. However, the effect of the alkyl at P on the physiological activity of compounds of this type had not been studied. To carry out this study, the O-ethyl-S-butyl alkylthiophosphonates EtO(R)P(O)SBu (I; R = Et, n-Pr, n-Bu), O-ethyl-S-(beta-ethyl-mercaptoethyl) alkylthiophosphonates $\text{EtO(R)P(O)SC}_2\text{H}_4\text{SEt}$ (II; R = Et, n-Pr, n-Bu), and methylsulfomethylates of II (III) were synthesized. O,O-Diethyl alkylphosphonates $(\text{EtO})_2\text{P(O)R}$, which were prepared starting with diethyl phosphite as $1/2$

USSR

UDC: 681.3.02

RUKHADZE, A. K., ABDUSHELISHVILI, G. T., GOGOLADZE, O. V.

"A System of Commands for a Compact Controller"

Tr. Gruz. politekhn. in-t (Works of the Georgian Polytechnical Institute), 1970, No 4(139), pp 101-109 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V777)

Translation: The paper presents a system of commands for the M-1000 miniature control computer. The system was developed at the Tbilisi Scientific Research Institute of Instrument Building and Means of Automation. It is noted that the M-1000 may act as a channel in an aggregate system of computer facilities, while it may be used separately as a miniature controller. V. Mikheyev.

USSR

UDC: 681.3.02

RUKHADZE, A. K., ABDUSHELISHVILI, G. T., GOGOLADZE, O. V.

"System of Commands for a Compact Control Computer"

Tr. Gruz. politekhn. in-t (Works of Georgian Polytechnical Institute),
1970, No 4(139), pp 101-109 (from RZh-Matematika, No 11, Nov 71 abstract
No 11V777)

Translation: A system of commands is presented for the small M-1000 control computer being developed at the Tbilisi Scientific Research Institute of Instrument Building and Automation Facilities. It is noted that the M-1000 can play the part of a channel in an aggregate system of computer facilities or can be used separately as a small control computer. V. Mikheyev.

2/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121160

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NINETY SIX PATIENTS WITH MOST WIDELY SPREAD CHRONIC DERMATOSES (ECZEMA, PSORIASIS, NEURODERMATITIS, ETC) WERE EXAMINED. UNDER THE EFFECT OF HORMONES THE ACID PRODUCING FUNCTION OF THE STOMACH IN THE INITIAL HYPOACIDIC AND NORMACIDIC STATES INCREASED SIGNIFICANTLY (P IS SMALLER THAN 0.05), AND THE DIGESTIVE POTENCY OF THE GASTRIC JUICE WAS ALSO HIGHER. IN LOWER ACIDITY THE TIME OF MAXIMUM MANIFESTATION OF ACIDITY INCREASED FROM 30 TO 45 MIN., IN NORMAL ACIDITY IT WAS SHORTENED FROM 60 TO 45 MINUTES. IN HYPERACIDIC STATE NO SIGNIFICANT CHANGES IN THE ACID PRODUCING AND DIGESTIVE FUNCTIONS WERE OBSERVED. ANALYSIS OF THE AVERAGE VALUES OF THE GASTRIC FUNCTION IN HORMONE THERAPY REVEALED A SIGNIFICANT SHORTENING OF THE LATENT PERIOD, ACCELERATION OF THE MOTOR FUNCTION AND CONSIDERABLE INCREASE IN THE ACID PRODUCING FUNCTION WITH REDUCTION IN THE QUANTITY OF THE SECRETATE PRODUCED. LONG TERM USE OF CORTICOSTEROIDS RESULTS IN INHIBITION OF THE SECRETORY FUNCTION OF THE STOMACH. FACILITY: SEMIPALATINSKIY MEDITSINSKIY INSTITUT.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ON THE FUNCTIONAL STATE OF THE STOMACH IN PATIENTS WITH CERTAIN
DERMATOSES TREATED WITH CORTICOSTEROIDS -U-
AUTHOR--ABDUSAMETOVA, SH.R.

COUNTRY OF INFO--USSR *A*

SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 5, PP 39-41

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SKIN DISEASE, CORTICOSTEROID, DIGESTIVE SYSTEM, HYDROGEN ION
CONCENTRATION, STOMACH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0486

STEP NO--UR/0206/70/000/005/0039/0041

CIRC ACCESSION NO--AP0121160

UNCLASSIFIED

USSR

UDC 591.1.05

ABDUSAMATOVA, M. V., and TAKHIROVA, M., Division of Physiology, Academy of Sciences Uzbek SSR

"Effects of Heat of Various Intensities on the Bioelectric Activity of Nuclei of the Hypothalamus"

Tashkent, Uzbekskiy Biologicheskii Zhurnal, Vol 16, No 3, 1972, pp 34-38

Abstract: The effects of exposure of cats to elevated temperatures (35, 40, 45, and 50°) on the bioelectric activity of nuclei of the hypothalamus were studied. Under the effect of the high temperatures, the number of low-frequency waves recorded on an electroencephalograph increased while the action potentials decreased. A maximum increase in the number of low-frequency waves was observed at 45° in the posterior division of the hypothalamus and at 50° in the anterior and lateral divisions. The number of high-frequency waves decreased in some nuclei. At 40° there was an increase in the number of high-frequency waves in the posterior region of the hypothalamus, which indicated that this region was activated at the temperature in question. With increasing temperatures to which the animals were exposed, the biopotentials of all nuclei except the supraoptic dropped significantly. The most pronounced decrease of action potentials, particularly of those with high frequencies, took place at 45-50°.

1/1

USSR

UDC 612.82/83

TURSUNOV, Z. T., ABUSAMATOVA, M. V., and TAKHIROVA, N., Physiology Division,
Academy of Sciences, Uzbek SSR

"Changes in the Bioelectrical Activity of the Cerebral Cortex After Repeated
Exposure to Heat Temperatures"

Tashkent, Uzbekskiy Biologicheskii Zhurnal, No 6, 1972, pp 42-46

Abstract: The bioelectrical activity of various cortical regions (frontal, temporal, parietal, occipital) was studied in adult cats exposed 2 hours a day for 15 days on a sunny platform to temperatures ranging from 33 to 40° C. EEG's were taken on the 1st, 5th, 10th, and 15th days of the experiment. Insolation plus high temperature altered the number of high- and low-frequency waves and their amplitude. On day 1 the slow waves were depressed and the beta-like rhythm increased. On day 5 there was a general slowing and inhibition of spontaneous electrical activity in all the cortical regions studied. The slow- and high-frequency oscillations decreased and their voltage was reduced. On day 10 the EEG changes generally stabilized, but by day 15 they had become less distinct and approached the original levels, an indication of adaptation by the central nervous system to heat stress.

1/1

USSR

UDC 616.927.7-022.37

KARIMOV, Z. K. and ABDUSAMATOV, A. G., Uzbek Institute of Epidemiology, Microbiology and Infectious Diseases, Tashkent

"Role of Some Farm Animals and Poultry in Spreading Paratyphoid B"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 10, 1972, pp 64-66

Abstract: The liver, spleen, gallbladder, and other organs of 122 cows, 3⁴ chickens, and 37 swine slaughtered in the Tashkent Meat Packing Plant were examined for the possible presence of paratyphoid B. Nine cultures of *Salmonella typhi*, *S. urbana*, and *S. paratyphi B* were isolated from 4 cows, 1 chicken, and 3 swine. The cultural, biochemical, and serological properties of the cultures were similar to those isolated from sick persons. Over 100 workers in the plant were examined as chronic bacteria carriers. *S. anatum* was isolated from the stools of only 4. Since this salmonella serotype belongs to the B group, the affected workers could not have transmitted the microorganisms to the animal organs when they were brought to the laboratory for study.

2/2 010

UNCLASSIFIED

PROCESSING DATE--300CT70

CIRC ACCESSION NO--AP0123678

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PMR SPECTRA OF GALANTHAMINE (I),
EPIGALANTHAMINE AND ITS ACETYL DERIV. INDICATED THE OH GROUP IN I IS
QUASIAxIAL BUT IN EPIGALANTHAMINE IS QUASIEQUATORIAL AND THE RING B
POSSESS HALF CHAIR CONFORMATION IN CIS LINKAGE, WITH RING A IN SOLID.
THE OH IN I IS INTERMOL. H BONDED. FACILITY: INST. KHIM. ROST.
VESHCHISTV, TASHKENT, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--NMR SPECTROSCOPIC STUDY OF THE STEREOCHEMISTRY OF GALANTHARINE TYPE
ALKALOIDS. I -U-
AUTHOR--(03)-YAGUDAYEV, M.R., ABDUSAMATOV, A., YUNUSOV, S.YU.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PRIR. SSSR. 1970, 6(2) 235-9

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--NMR SPECTRUM, ALKALOID, STEREOCHEMISTRY, POLYMER STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1890

STEP NO--UR/0393/70/000/000/0000/0000

CIRC ACCESSION NO--AP0123678
UNCLASSIFIED

UDC 547.944/945

USSR

MIRZOYEV, Kh. M., ~~ABDUSAMATOV, A.~~, and YUNUSOV, S. Yu., Azerbaydzhan Medical Institute imeni N. Narimanov; "Order of the Red Banner of Labor" Institute of the Chemistry of Plant Materials, Academy of Sciences of the Uzbek SSR

"Alkaloids of *Taxus Baccata*"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 6, 1970, pp 777-778

Abstract: The authors investigate the alkaloid make-up of the leaves of *Taxus baccata* (the English yew). An ether extract of the plant material yielded an alkaloid sum which was chromatographically separated into two bases -- A and B. Base B is identified as taxine. IR-spectroscopic data are given for base A.

UDC 547.944/945

USSR

ZIYAYEV, R., ABDUSAMATOV, A., YUNUSOV, S. YU., Order of the Red Banner of Labor
Institute of the Chemistry of Plant Substances of the Uzbek SSR Academy of
Sciences

"Alkaloids of Verbascum Songoricum"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 6, 1971, pp 853-854

Abstract: A study was made of Verbascum songoricum Shrenk. (Scrophulariaceae family) gathered at Chimgan of Tashkent Oblast during various periods of vegetation and each organ separately. The total alkaloids in percent by weight of the dry plant are presented for each of the organs. Ultraviolet, infrared and mass spectrographic data show that anabasin, plantagonin, acetamide and a base with a melting point of 195-196° were isolated. This is the first time anabasin was isolated from Scrophulariaceae.

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USSR

UDC 547.944/945

ABDUSAMATOV, A., RASHIDOV, M. U., and YUNUSOV, S. YU., Red Banner of Labor
Institute of Plant Chemistry, Uzbek Academy of Sciences

"The Structure of Pediculidine"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 3, 1971, pp 304-306

Abstract: The alkaloids of a 1968 sample of Pedicularis olgae, obtained at Sagyrdasht, Tadzhik SSR, were extracted with chloroform (they made up 0.59% of the dry sample). The picrate of this base was then extracted from the ether portion and studied chromatographically (on aluminum oxide). A base of composition $C_{10}H_9NO$ with melting point of $74-75^{\circ}C$ was extracted; this alkaloid was named pediculidine.

Infrared, ultraviolet and nuclear magnetic resonance and mass spectra were used to determine the structure of the new alkaloid.

USSR

UDC 547.944/945

NINOVA, P., ABDUSAMATOV, A. and YUNUSOV, S. YU., Higher Medical Institute, Sofia, and Red Banner of Labor Institute of Plant Physiology, Uzbek Academy of Sciences

"Alkaloids of Verbascum Nobile"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 4, 1971, p 540

Abstract: Verbascum nobile Vel., of the Scrophulariaceae family, is endemic along the Strum River in southwestern Bulgaria; it has a fairly high alkaloid content.

A chloroform extract, following processing, yielded 0.5% ether-soluble, and 0.6% chloroform-soluble alkaloids (percent of dry plant weight). the ether portion of the mixture was divided into 10 fractions on the basis of basicity. Three individual bases, the third with melting point of 100°C, were separated. The first ($C_{25}H_{42}N_4O_4$), with melting point 74-75°C, was named verbasine; the second ($C_{27}H_{44}N_4O_4$), with melting point 125-126°C, was named verbascine.

USSR

UDC 944/945

ABDUSAMATOV, A., and YUNUSOV, S. YU., Red Banner of Labor Institute of Plant Chemistry, Uzbek Academy of Sciences

"Pediculinin -- A New Alkaloid from Pedicularis Olgae"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 3, 1971, pp 306-309

Abstract: A new alkaloid, pediculinin ($C_{10}H_{13}NO$, melting point $133-134^{\circ}C$), was obtained from the chloroform portion of an extract of Pedicularis olgae. A tentative structural formula is proposed.

USSR

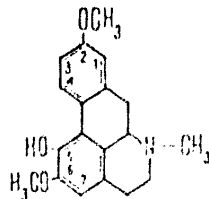
UDC: 547.944/945

ZIYAYEV, R., ABDUSAMATOV, A., YUNUSOV, S. Yu., "Order of the Red Banner of Labor" Institute of the Chemistry of Plant Materials, Uzbek SSR Academy of Sciences

"Lirinin -- a new Alkaloid From Liriodendron Tulipifera"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 1, 1973, pp 67 72

Abstract: A new alkaloid which the authors have named "lirinin" was isolated from the alkaloid sum (chloroform extraction) of leaves of the tulip tree (*Liriodendron tulipifera*) with empirical formula $C_{19}H_{21}O_2N$, melting point 152-154°C (alcohol), $[\alpha]_D^{22}$ -55°C (c 0.089, chloroform). Analysis of UV, IR, NMR and mass spectra shows that lirinin has the structure of 5-hydroxy-2,6-dimethoxyaporphine



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2/2 019

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138885

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRIME134 CE YIELDS PRIME134 LA YIELDS PRIME134 BA DECAY CHAIN WAS STUDIED BY 9 GROUPS STARTING IN 1951. RECENTLY, RADIOACTIVE CE WAS OBTAINED IN THE IRRADN. OF GD FOIL BY 660 MEV P FROM THE DUBNA SYNCHROCYCLOTRON, AND WAS SEPD. BY CHROMATOG. THE GAMMA RAY SPECTRUM WAS STUDIED BY USING A GE(LI) SPECTROMETER. THE RESULTS ARE COMPARED WITH THOSE OBTAINED RECENTLY BY DZHELEPOV, ET AL. (1969) AND ABDUL-MALEK AND HAUMANN (1968). A SCHEME OF LEVELS OF PRIME134 BA IS PROPOSED. FACILITY: OB'EDIN, INST. YAD. ISSLED., DUBNA, USSR.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--GAMMA RAY SPECTRUM OF THE CERIUM 134 YIELDS LANTHANUM 134 YIELDS
BARIUM 134 CHAIN -U-
AUTHOR-(04)-ABDURAZAKOV, A.A., GROMOV, K.YA., ISLAMOV, T.A., SIBIROV, B.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(4), 734-9
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--GAMMA RAY, SPECTRUM, CERIUM ISOTOPE, LANTHANUM ISOTOPE, BARIUM
ISOTOPE, IRRADIATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/2031 STEP NO--UR/0048/70/034/004/0734/0739
CIRC ACCESSION NO--AP0138885
UNCLASSIFIED

AT0033418

for determining individual displacement. An expression is derived for determining the fundamental tone period of a dam. The BESM-2 and Minsk-22 computers are used in computing data for the Nurekskaya and Rogunskaya hydroelectric stations. Results of these calculations show that applicable engineering results can be obtained without using more than 10 finite elements.

7/2

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AT0033418

USSR

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UR0425

JPRS 50083
UDC 627.814(575.3)

NAPETVARIDZE, SH. G., BELGORODSKAYA, G. N., ABDURAUFOV, KH. SH., Institute
of Earthquakeproof Construction and Seismology, Academy of Sciences of the
Tadzhik SSR

"Elementary Band Method in Solving Earthquakeproof Dam Design Problems"

Dushanbe, Doklady Akademii Nauk Tadzhikskoy SSR, Vol 12, No 4, pp 71-76

Abstract: The authors present a method for determining the seismic stability and dynamic rigidity of dams. Using the cross section of a dam, it is divided into n uniformly thick horizontal layers, resulting in a system with n degrees of freedom. The maximum number of horizontal layers n is conditioned both by the dimensions of the dam and the program which can be realized by the computer. In this case $n \leq 10$. The mass, horizontal shift, and rigidity are calculated for each layer. Earthquake accelograms are used as the dynamic disturbance for the given system. Relative horizontal shifts are calculated and are used

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19701912

12

USSR

ABDURASULEVA, A. R., et al., USSR Author's Certificate No 327150, filed 28 May 70, published 16 Mar 72

m.p. 59°C (benzene), 4-benzylresorcinol, m.p. 78°C (benzene). From 15.5 g resorcinol methyl ether, 3.16 g PhCH_2Cl and 0.0054 g $\text{FeCl}_3 \cdot 12\text{H}_2\text{O}$ 4.9 g of mixture is obtained, b.p. 157-160°C/2, n_D^{20} 1.5923, containing 21% 2- PhCH_2 -3- $\text{MeOC}_6\text{H}_3\text{OH}$, m.p. 77°C (hexane), 36% 4- PhCH_2 -3- $\text{MeOC}_6\text{H}_3\text{OH}$, m.p. 51°C (hexane), 43% 6- PhCH_2 -3- $\text{MeOC}_6\text{H}_3\text{OH}$, m.p. 43°C. A heating of a mixture consisting of 27.6 g dimethyl ether of resorcin, 2.53 g PhCH_2Cl and 0.052 g $\text{FeCl}_3 \cdot 12\text{H}_2\text{O}$ at 110-130°C for 30 min. yields 4.2 of substance, b.p. 146-147°C/2, n_D^{20} 1.5763, which contains according to gas-liquid chromatography 27% 2- PhCH_2 -1,3-(MeO) $_2\text{C}_6\text{H}_3$ and 73% 4- PhCH_2 -1,3-(MeO) $_2\text{C}_6\text{H}_3$.

USSR

UDC 632.95

ABDURASULEVA, A. R., AKHMEDOV, K. N., YUSUPOV, A., and TADZHIMUKHAMEDOV, Kh. S., Tashkent University

"Synthesis of Benzylphenols or Benzylresorcinols and Their Methyl Ethers"

USSR Author's Certificate No 327150, filed 28 May 70, published 16 Mar 72, (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom (I, L-S), No 1(II), 1973, Abstract No 1N480P by T. A. Belyayeva)

Translation: Benzylphenols, benzylresorcinols and their methyl ethers which can be used as bactericides, fungicides, or antihelminths, are synthesized from phenols and resorcinols in the reaction with PhCH_2Cl during heating in the presence of $\text{FeCl}_3 \cdot 12\text{H}_2\text{O}$. Example: A mixture consisting of 23 g PhOH , 6.33 g PhCH_2Cl and 0.0076 g $\text{FeCl}_3 \cdot 12\text{H}_2\text{O}$ is heated at $100-110^\circ\text{C}$ for 20 min., excess of PhOH is removed by distillation at 10-15 mm pressure, the residue is redistilled, and fractions are collected at $135-142^\circ\text{C}/2$. The resulting 8 g mixture contains 58% o- $\text{PhCH}_2\text{C}_6\text{H}_4\text{OH}$, b.p. $130-131^\circ\text{C}/1$, and 42% p- $\text{PhCH}_2\text{C}_6\text{H}_4\text{OH}$, m.p. $83-84^\circ\text{C}$ (CCl_4). In a similar way another mixture is prepared, b.p. $140-145^\circ\text{C}/2$, consisting of 44.6% o- $\text{PhCH}_2\text{C}_6\text{H}_4\text{OMe}$, m.p. $30-31^\circ\text{C}$ (diluted alcohol) and 55.4% p- $\text{PhCH}_2\text{C}_6\text{H}_4\text{OMe}$, b.p. $154-155^\circ\text{C}/4$. Chromatographic analysis (Al_2O_3) showed the presence of: 2-benzylresorcinol, 1/2

2/2 030

UNCLASSIFIED

PROCESSING DATE--300CT70

CIRC ACCESSION NO--AP0125231

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REPACEMENT OF CERAMIC (A) PACKINGS WITH MORE STABLE POLYPROPYLENE (B) RING PACKINGS WAS INVESTIGATED IN THE DESORPTION OF CO SUB2 FROM MONOETHANOLAMINE (1) SOLNS. DESORPTION EFFICIENCIES ARE COMPARED FOR DIFFERENT SIZE A AND B PACKINGS DETD. AT LIQ. FLOW RATES OF 5-40 M PRIME3-M PRIME2 HR ON SOLNS. CONTG. 60-70 G CO SUB2-L. HIGHEST DESCRIPTION (59PERCENT) EFFICIENCIES WERE OBTAINED ON 15 TIMES 15 TIMES 2 MM A AND B RINGS AT 116 AND 118DEGREES, RESP. CO SUB2 DESORPTION IN A GIVEN COLUMN WAS DOUBLED AT HIGH LIQ. FLOW RATES BY FLOATING (FLUIDIZING) THE B RINGS IN I WITH A VAPORGAS MIXT. THE HYDRODYNAMICS OF THE FLOATING RINGS WERE POOR AND THEREFORE NOT SUITABLE FOR SUCH AN OPERATION. FACILITY: TASHKENT. POLITEKH. INST., TASHKENT, USSR.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DESORPTION OF CARBON DIOXIDE FROM MONOETHANOLAMINE SOLUTIONS IN A
COLUMN PACKED WITH POLYPROPYLENE RINGS -U-
AUTHOR-(03)-MUKHITDINOV, KH.KH., LEVSH, I.P., ABDURASHIDOV, T.R.
COUNTRY OF INFO--USSR
SOURCE--UZB. KHIM. ZH. 1970, 14(2), 81-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--DESORPTION, CARBON DIOXIDE, MONOETHANOLAMINE, POLYPROPYLENE,
FLUID FLOW
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1609 STEP NO--UR/0291/70/014/002/0081/0083
CIRC ACCESSION NO--AP0125231
UNCLASSIFIED

Acc. Nr

AP0045161

Abstracting Service:
CHEMICAL ABST.

5-70

Ref. Code

UR0191

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/ 91076e Curing a thermosetting furfural-phenol-formaldehyde resin. Magrupov, F. A.; Abdurashidov, T. B. (USSR). *Plast. Massy* 1970, (1), 48-50 (Russ.). ~~A thermosetting furfural (I)-phenol-HCHO resin FM-2 was hardened with PhSO₃H, ZnCl₂, maleic anhydride, phthalic anhydride, and Bz₂O₂ at 130-50°. Most effective were 2% PhSO₃H or 5% ZnCl₂ (gel time, 15 and 17 sec, resp.). Addn. of I or PhOH inhibited the hardening, presumably due to a reaction between the monomers and the functional groups of FM-2. An increase in the hardening rate was obsd. in the presence of 5% Bz₂O₂ or dicumyl peroxide. Hardening of FM-2 involved polycondensation and partial polymn.~~
CKJR

LD

 REEL/FRA
19780061

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USSR

UDC 532.5:621.22

ABDURAMANOV, A. A., ZHANGARIN, A. I.

"Study of the Vacuum Hydrocyclone and Its Hydraulic Calculation"

Tr. Kazakhsk. NII vod. kh-va (Works of Kazakh Scientific Research Institute of the Water Industry), 1971, Vol. 7, pp 560-572 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B769)

Translation: A large quantity of experimental data was analyzed and processed concerning the distributions of radial and axial components of velocity along the radius of a hydrocyclone at different cross sections over the height. Empirical formulas were obtained for calculating these components, which determine the flow of liquid through sand and drainage openings of a hydrocyclone and the height of the intake of the pump for various cases of the location of the cyclone in the intake line of the pump. T. S. Solomakhova.

USSR

ABDURAKHMANOV, T., INAMOV, I.

"Unbiased Estimates of Discrete Distribution of Probabilities of Defective Products Based on the Results of Statistical Plans Such as the Single Sample with Double Testing Level"

Nauch. tr. Tashkent. Un-t. [Scientific Works of Tashkent University], 1972, No 418, pp 3-11 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 5 V232 by V. Kolchin).

Translation: A plan is studied for acceptance testing with two levels, in which of a group submitted for testing a random sample of volume n is selected and the group is accepted if the number $x(n)$ of faulty products in the sample is not over c_1 ; the group is rejected if $x(n) \geq c_2$, and subjected to complete testing if $c_1 < x(n) < c_2$. This article produces unbiased estimates for the probabilities

$$P\{X^{(m)} = l\}, m=0, 1, 2; l=0, 1, \dots, n,$$

where $X^{(0)}$ is the number of defective products in the group submitted for testing, $X^{(1)}$ is the number of defective products in an accepted group and $X^{(2)}$ is the number of defective products in a rejected group.

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USSR

UDC 539.216.22:621.318

ABDURAKHMANOV, A. A., Dagestanskiy State University imeni V. I. Lenin

"Theory of Magneto-optical Phenomena in Thin Ferromagnetic Films"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 1, 1970, pp 60-64

Abstract: The article attempts to give a quantum theory for magneto-optical phenomena in thin ferromagnetic films. The complex admittance tensor is found to a second approximation according to scattering potential (according to small parameter λ) and in a second approximation according to spin-orbital connection for the case in which conduction electrons are anomalously scattered by impurity centers under the action of an external variable motive force. Thin-film magneto-optical phenomena due only to the presence of spontaneous magnetization are considered. In the solution of the kinetic equations the Kohn-Luttinger method is used to find the complex cross conduction tensor $\sigma_{yx}(k, \omega)$ and the magneto-optical parameter connecting

$\sigma_{yx}(k, \omega)$ with the plane Hall effect constant.

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2/2 012 UNCLASSIFIED PROCESSING DATE-- J2OCT70
CIRC ACCESSION NO--AP0109550

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR ANALYZED THE INCIDENCE OF TYPHOID FEVER IN DUSHANBE IN 1953-1967. IT WAS SHOWN THAT THE LAST FEW YEARS THE INCIDENCE OF TYPHOID FEVER WAS REDUCED FROM 9 TO 11 TIMES IN COMPARISON WITH 1953. THE HIGHEST INCIDENCE WAS OBSERVED IN THE GROUP OF CHILDREN AGED FROM 7 TO 14 YEARS. CHILDREN AGED FROM 3 TO 6 YEARS, ADOLESCENTS AND ADULTS UNDER 30 YEARS OF AGE WERE LESS FREQUENTLY AFFECTED, AND IN INFANTS UNDER 3 YEARS AND ADULTS OVER 30 YEARS OF AGE THE DISEASE WAS SELDOM ENCOUNTERED. THE INCIDENCE OF THE DISEASE IN MEN WAS 1.3 TIMES GREATER THAN IN WOMEN, CHIEFLY ON ACCOUNT OF PRESCHOOL CHILDREN WHO DID NOT ATTEND CHILDREN'S INSTITUTIONS, AND SCHOOLCHILDREN. THE SEASONAL CHARACTER OF TYPHOID FEVER IN DUSHANBE WAS CHARACTERIZED BY THE RISE OF ITS INCIDENCE IN JULY-NOVEMBER, WITH THE MAXIMUM IN AUGUST, AND REDUCTION IN JANUARY. DURING THE RISE OF TYPHOID INCIDENCE 77.5PERCENT OF THE AFFECTED PERSONS WERE AGED FROM 3 TO 29 YEARS. THE MATERIALS OBTAINED, AS WELL AS DATA ON A GREAT VARIETY OF PHAGE TYPE REFERENCE OF THE STRAINS OF TYPHOID BACILLI ISOLATED, POINTED TO THE LEADING ROLE OF THE WATER MODE OF SPREAD OF TYPHOID IN DUSHANBE.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--SOME PROBLEMS OF EPIDEMIOLOGY OF TYPHOID FEVER IN DUSHANBE -U-
AUTHOR--ABDURAKHMONOV, KH.R. A
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOLOGII, 1970 NR 3,
PP 80-82
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--EPIDEMIOLOGY, TYPHOID FEVER, DISEASE INCIDENCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/1490 STEP NO--UR/0016/70/000/003/0030/0082
CIRC ACCESSION NO--AP0109550
UNCLASSIFIED

USSR

NASYROV, Yu. S., et al., Doklady Akademii Nauk Tadzhikskoy SSR, No 9, 1971, pp 53-60

incorporation of C^{14} -labeled leucine into the chloroplast proteins was sharply inhibited by ultraviolet during the first 10 to 30 hours of exposure of the etiolated seedlings. It was concluded that the molecular mechanism of action of high-altitude radiation on photosynthesis is controlled by the inhibition of light-inducible transcription of RNA into DNA of the plastids and suppression of protein synthesis.

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Phytology

USSR

UDC 581.132

NASYROV, Yu. S., Corresponding Member, Academy of Sciences Tadzhik SSR, ABDURAKHMANOVA, Z. N., ERGASHEV, A., and ALIYEV, K., Institute of Plant Physiology and Biophysics, Academy of Sciences, Tadzhik SSR

"Mechanism of Action of High-Altitude Ultraviolet Radiation on the Development and Functional Activity of the Photosynthetic Apparatus"

Dushanbe, Doklady Akademii Nauk Tadzhikskoy SSR, No 9, 1971, pp 53-60

Abstract: Ten-day-old etiolated pea seedlings were exposed to sunlight for 4 to 5 days, during which time measurements were made of the photosynthetic assimilation of $C^{14}O_2$ and content of chlorophyll, nucleic acids, and proteins in the subcellular structures. Appreciable amounts of chlorophyll did not form until 7 to 10 hours after exposure. There was a correlation between the formation of chlorophyll and assimilation of $C^{14}O_2$, which persisted for 20 hours, after which the pigment content stabilized while the assimilation of carbon continued to increase rapidly. Total RNA decreased sharply the first 10 to 20 hours and then increased. Light-dependent RNA synthesis in the chloroplasts was much more sensitive to ultraviolet radiation than RNA synthesis in the nuclei. The protein-synthesizing system of the chloroplasts was more sensitive than the other subcellular structures. The

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USSR

ABDURAHMANOVA, SH. G., et al, Uzbekskiy Khimicheskiy Zhurnal,
No 3, 1971, pp 33-36

low cation concentrations in the solution (0.005-0.01 n.) the actual amount of absorbed metal appears to be higher than the rated. As the salt concentration is increased, the amount of the absorbed metal becomes lower than the rated which may be related to a lower degree of dissociation of salts in fairly concentrated solutions. The active cation absorption from low-concentration solutions may be attributed to the process of salification and complex formation with CN groups. It is shown that the copolymer fiber II absorbs 1.5 or twice the amount of metal ions of fiber I. The multiple plasticized drawings, treatment temperatures and the anion combined with the metal have no appreciable effect on the balanced absorbed amount of metal.

USSR

UDC 677.494.745.32

ABDURAKHMANOVA, SH. G., GELLER, A. A., GELLER, B. E., Tashkent
Institute of the Textile and Light Industry

"Sorption of Cation Exchange Resins by Fibrous Materials Based
on Acrylonitrile Polymers and Copolymers"

Tashkent, Uzbekskiy Khimicheskiy Zhurnal, No 3, 1971, pp 33-36

Abstract: Discussed are the sorption kinetics of Cr^{3+} , Zn^{2+} , Pb^{2+} and Sn^{4+} cations from the aqueous solutions of the corresponding salts at 25-75°C using polyacrylonitrile-base fiber(I) with a specific surface of 42.0 m^2/g and 92% acrylonitrile copolymers, 6.7% methyl acrylate and 1.3% itaconic acid(II) with a specific surface of 46.0 m^2/g . Untreated freshly prepared polyacrylonitrile fiber is a fairly loose, oriented gel-like, polymeric substrate. The salt concentration in the experimental solutions ranged from 0.005 to 3 n. The experimental details cited are, as well as the data on testing time, amount of salt absorbed and temperatures. A table shows the amounts of cations on the fiber (both rated and actual) as a function of salt concentration in the solution. At 1/2

USSR

UDC: 621.376.232.2

ABDURAKHMANOV, K. P. and KUTOV, B. A.

"Sensitive Synchronous Detector"

Moscow, Pribory i Tekhnika Eksperimenta, No. 3, 1971, pp 127-128

Abstract: The difficulty involved in the design of transistorized synchronous detectors is finding transistors for switching with small temperature drift. The circuit described in this article uses integrated microcircuits capable of operating in a broad band of frequencies with narrow temperature drift; it consists of a transistor-analog multiplier, an integrating amplifier, and an emitter follower. The multiplier is an integrated circuit, P2222 type, and a hybrid 10MD10 or 1MM6. A description of the circuit's operation together with a schematic of the entire instrument is provided. It has been successfully used to observe small nonlinearities in the volt-ampere characteristics of tunnel structures. The authors are associated with the Institute of Semiconductors, USSR Academy of Sciences, Leningrad.

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ABDURAKHMANOV, B.M.

3145 15212
4-13

V-4. KINETICS OF THE INITIAL GROWTH STAGE OF EPITAXIAL LAYERS

[Article by B. M. Abdurakhmanov, M. R. Greynub, V. P. Paschidenko, V. V. Franchenko, Tashkent, Novosibirsk, III Sibirskiy nauchnyy seminar Rossiya i SSSR, Poluprovodnikovyye Kristally i Plazma, Russian, 12-17 June, 1972, p. 34]

A study was made of the phenomenon of inconsistency of the silicon deposition rate during the growth process. The silicon growth kinetics in the initial stages where this phenomenon is observed were studied in a broad range of crystallization conditions (the deposition temperature, the SiCl_4 concentration and the flow rate). The experimental results show that the growth rate in the initial stages is higher than under steady-state conditions. The ratio of the silicon crystallization rates in the first and tenth minutes of deposition decreases with an increase in the SiCl_4 concentration, and for SiCl_4 0.15 percent it is 3.2 and for SiCl_4 6.0 percent it is 1.8. At a high deposition temperature, the establishment of the stationary growth rate takes place more rapidly.

The instrument analysis of the gas phase deposition with respect to thermal conductivity and with respect to infrared absorption spectra permitted estimation of the periods of nonstationarity of the vapor-gas mixture composition in the reactor in the case of adaption and shut-off of silicon tetrachloride. On the basis of the data obtained, calculated estimates were made which demonstrated that the observed effect of inconsistency of the growth rate in the initial stages is not determined by the nonstationarity of the gas phase composition but is caused by the effect of surface properties of the substrate on the crystallization process.

2/2 014

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119717

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ABOUT 1000 LINES WERE IDENTIFIED IN THE MICROWAVE SPECTRUM (11.8-31.4 GHZ) OF GASEOUS ISO,PROH, MEASURED AT MINUS 50DEGREES AND 10 PRIMENEGATIVE3-10 PRIMENEGATIVE2 MM. THE PREFERRED ROTAMER OF IUS, PROH IS THE TRANS FORM WITH THE OH IN THE SYMMETRY PLANE.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ROTATIONAL CONSTANTS OF ISOPROPYL ALCOHOL IN THE TRANS CONFORMATION
-U-
AUTHOR-(03)-IMANOV, L.M., ABDURAKHMANOV, A.A., YELCHIIYEV, M.N.
COUNTRY OF INFO--USSR
SOURCE--OPT. SPEKTROSK. 1970, 28(2), 251-3 A
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--MICROWAVE SPECTROSCOPY, PROPANOL, ROTATIONAL SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0810 STEP NO--UR/0051/70/028/002/0251/0253
CIRC ACCESSION NO--AP0119717
UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AT0108567

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE ATTEMPTS TO GIVE A QUANTUM THEORY FOR MAGNETOOPTICAL PHENOMENA IN THIN FERROMAGNETIC FILMS. THE COMPLEX ADMITTANCE TENSOR IS FOUND TO A SECOND APPROXIMATION ACCORDING TO SCATTERING POTENTIAL (ACCORDING TO SMALL PARAMETER λ) AND IN A SECOND APPROXIMATION ACCORDING TO SPIN ORBITAL CONNECTION FOR THE CASE IN WHICH CONDUCTION ELECTRONS ARE ANOMALOUSLY SCATTERED BY IMPURITY CENTERS UNDER THE ACTION OF AN EXTERNAL VARIABLE MOTIVE FORCE. THIN FILM MAGNETOOPTICAL PHENOMENA DUE ONLY TO THE PRESENCE OF SPONTANEOUS MAGNETIZATION ARE CONSIDERED. IN THE SOLUTION OF THE KINETIC EQUATIONS THE KOHN LUTTINGER METHOD IS USED TO FIND THE COMPLEX CROSS CONDUCTION TENSOR $\Delta_{\text{SUBYX}}(k, \omega)$ AND THE MAGNETOOPTICAL PARAMETER CONNECTING $\Delta_{\text{SUBYX}}(k, \omega)$ WITH THE PLANE HALL EFFECT CONSTANT.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--THEORY OF MAGNETOOPTICAL PHENOMENA IN THIN FERROMAGNETIC FILMS -U-
AUTHOR--ABDURAKHMANOV, A.A. *A*
COUNTRY OF INFO--USSR
SOURCE--TOMSK, IZVESTIYA VYSSHIKH UCHEBNIKH ZAVEDENIY, FIZIKA, NO 1, 1970,
PP 60-64
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--FERROMAGNETIC FILM, OPTIC PROPERTY, HALL EFFECT, MAGNETIC
PROPERTY, QUANTUM THEORY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0256 STEP NO--UR/0139/70/000/001/0060/0064
CIRC ACCESSION NO--AT0108567
UNCLASSIFIED

USSR

UDC 621.910.71

ABDURAKHMANOV, A. A., YAKUNIN, G. I.

"Appearance of the Rebinder Effect in Testing of Certain Steels"

Izvestiya Akademii Nauk Uzbekskoy SSR, Seriya Tekhnicheskikh Nauk, No 5, 1971, pp 51-52.

ABSTRACT: P. A. Rebinder discovered that when monocrystals are tested in a surface-active medium, a significant reduction in strength is observed. However, very little data is available concerning the influence of external films on the strength of metals. It was determined that the influence of surface films such as oxide films on the strength of steels may vary depending on the material of the specimen, surrounding medium and temperature-velocity factors of deformation. For example, Type R18 tool steel was found to be actually stronger at 400-600° with an oxide film than without.

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Acc. Nr **AP0055217**Abstracting Service: **A**

Ref. Code

CHEMICAL ABST. **6-70****4K9075**

113064d Effects of catalyst composition and structure on the hydrogenation of cottonseed oil. Abdurakimov, A. A., Kadyrov, Yu.; Usmanova, Z. U.; Sarayev, M. ~~(Tashkent)~~ Politekh. Inst., Tashkent, USSR. *Maslo-Zhir. Prom.* 1970, 36:1, 15-16 (Russ.). The effects of compa. and structure of Raney Ni-Cu catalysts on continuous hydrogenation of cottonseed oil at 200° and an elevated pressure were investigated. All the catalysts tested were prepd. under const. conditions, as follows: Ni-Cu-Al alloys with a const. amt. of 50% Al and various amts. of Ni and Cu were leached with NaOH soln., washed, and dried. The Raney catalysts obtained were directly used for redn. in a reactor, or were oxidized in a stream of O at an elevated temp. The optimum Ni:Cu was 1:1. An increase in the amt. of Cu decreases the activity of the catalyst, but increases its selectivity. The catalysts oxidized before redn. were more active and had a higher stability than catalysts prepd. without previous oxidn. An increase in the amt. of Cu leads to a decrease in m.p., acidity, and hardness of the hydrogenated fat. An increase in the redn. temp. to 300° leads to an increase in the activity of the catalyst, but a further increase in the redn. temp. decreases its activity. It is caused by sintering of the crystals of Ni and Cu. M. Zaicev

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GUSEYNOV, A. I., ABDURAGIMOV, M. A., Doklady Akademii Nauk AzerbSSR, Vol 28, No 3, 1972, pp 3-6

where n is an integer of the value of 2 or more, $G(t)$ is a given function of the class $H_k(\omega)$ on L and does not vanish anywhere on L ; $f(t, u, v)$ is a function defined for $t \in L$, $u = \varphi^+(z) \in F^+$, $v = \varphi^-(z) \in F^-$, satisfying the condition

$$|f(t_1, u_1, v_1) - f(t_2, u_2, v_2)| \leq A[\omega(|t_2 - t_1|) + |u_1 - u_2| + |v_1 - v_2|] \\ \omega(s) \in \Phi^+, 0 < s \leq l, A = \text{const} > 0,$$

$F(t, h)$ is a function defined for $t \in L$, $h = h(t) \in H(\omega)$, satisfying the condition

$$|F(t, h)| \leq B(1 + |h|^{n-1}), 0 < t \leq n-1, \\ |F(t_1, h_1) - F(t_2, h_2)| \leq B[(1 + h^{n-1})\omega(|t_1 - t_2|) + (1 + h^{n-1-1})|h_1 - h_2|], \\ \tilde{h} = \max(|h_1|, |h_2|).$$

USSR

GUSEYNOV, A. I., Academician, ABDURAGIMOV, M. A., Institute of Cybernetics,
Dagestan State University imeni V. I. Lenin

"A Linear Problem of Conjugation"

Baku, Doklady Akademii Nauk AzerbSSR, Vol 28, No 3, 1972, pp 3-6

Abstract: Let L be a simple, closed Lyapunov contour in the plane of a complex variable which surrounds the coordinate origin; D^+ and D^- are respectively the inner and outer regions into which L divides the plane. The symbols F^+ and F^- denote the space of functions which are analytical in D^+ (D^-) and continuous in \bar{D}^+ (\bar{D}^-) with norm

$$\|\Phi^+(\cdot)\| = \max_{z \in \bar{D}^+} |\Phi^+(z)| \quad (\|\Phi^-(z)\| = \max_{z \in \bar{D}^-} |\Phi^-(z)|).$$

We say that $u(t) \in H_k(\omega)$, $t \in L$, if $|u(t)| \leq k$, $|u(t_1) - u(t_2)| \leq k\omega(t_1 - t_2)$; $t_1, t_2 \in L$, $\omega(s) \in \Phi^+$. The authors find the functions $\Phi^+(z) \in F^+$ and $\Phi^-(z) \in F^-$ with respect to the boundary condition

$$[\Phi^+(t)]^n + F\left(t, \int_{t_1=t}^t (f[\tau, \Phi^+(\tau), \Phi^-(\tau)] d\tau)\right) = G(t)\Phi^-(t), \quad (*) :$$

USSR

UDC: 536.468

TODES, O. M., IONUSHAS, K. K., GOL'TSIKER, A. D., and ABDURAGIMOV, I. M.

"Investigating the Inhibition of Flame Propagation in Air-Dispersed Systems"

Novosibirsk, Fizika goreniya i vzryva, No 2, 1973, pp 204-210

Abstract: This paper is the follow-up of an earlier article (O. M. Todes, et al, Tretiy Vses. simposium po goreniyu i vzryvu, Author's abstract, Chernogolovka, 1971) which developed a theory of the propagation of flames in air-dispersed media due to heat radiation transmission. The present paper considers the principal consequences of this theory, important in the study of the effectiveness of inhibiting the flames for the simplest case in which the radiative front is deep and its frontal limit can be considered a plane. Experiments are described to determine the speeds of the propagation and to compare them, in their order of magnitude, with those specified by the theory; a diagram of the equipment is given with the method of the experiment. The results of the latter confirm the assumption of heat radiation as the means of propagation and demonstrate the effectiveness of flame inhibition by halide hydrocarbons.

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2/2 015

UNCLASSIFIED

PROCESSING DATE--160CT70

CIRC ACCESSION NO--AR0118176

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AS THE INITIAL MODEL FOR THE PROBLEM, THE AUTHORS ASSUME THAT THE MATRIX IS A SPHERE WITH CENTRALLY LOCATED DIAMOND INCLUSION. THE SYSTEM IS SUBJECTED TO A TEMPERATURE FIELD WHICH IS CONSTANT IN THE RADIAL DIRECTION. THE PROBLEM IS SOLVED FOR THE CASE OF A UNIFORM INCREASE IN TEMPERATURE (STEADY STATE) WHERE THERMOELASTIC INTERACTION RESULTS FROM THE DIFFERENCE BETWEEN THE MODULI OF ELASTICITY AND COEFFICIENTS OF THERMAL EXPANSION OF MATRIX AND INCLUSION. THE RESULTS OF CALCULATION OF TEMPERATURE STRESSES ARE GIVEN FOR A SPECIFIC EXAMPLE. THE POSSIBILITY OF DEVELOPMENT OF PLASTIC ZONES IN THE REGION OF CONTACT BETWEEN THE DIAMOND PARTICLE AND THE SURROUNDING MATRIX IS DISCUSSED.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THERMOELASTIC INTERACTION OF DIAMONDS AND DIAMOND CONTAINING
MATRICES -U-
AUTHOR-(03)-ABDULZADE, A.M., ABRASOV, I.K., IBRAGIMOV, A.A.

COUNTRY OF INFO--USSR *A*

SOURCE--ZA TEKH. PROGRESS (TOWARD TECHNICAL PROGRESS), 1969, NO 7, PP
REFERENCE--RZH-MEKHANIKA, NO 2, FEB 70, ABSTRACT NO 2V1149
DATE PUBLISHED----FEB 70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MECH., IND., CIVIL AND
MARINE ENGR
TOPIC TAGS--DIAMOND, THERMOELASTICITY, CUTTING TOOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1019

STEP NO--UR/0423/69/000/007/0024/0025

CIRC ACCESSION NO--AR0118176

UNCLASSIFIED

USSR

ABDULSABIROV, R. Yu., GREZNEV, Yu. S., ZARIPOV, M. M., STEPANOV, V. G.,
Kazan' State University imeni V. I. Ul'yanov-Lenin

"Temperature Dependence of the Electron Paramagnetic Resonance Spectrum of
Bivalent Manganese Cation in Cesium Sulfate"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 6, Jun 72, pp 1816-1817

Abstract: The EPR spectrum of Mn^{2+} was studied in the temperature range of 4.2-300°K on a wavelength of 8 mm in Cs_2SO_4 crystals grown from an aqueous solution doped with about 1.5% $MnSO_4$. It was found that the Cs_2^+ ions replace the Mn^{2+} ions and that the excess positive charge is compensated by a vacancy in the position of the adjacent Cs_1^+ . The angles calculated for the $Cs_2^+-Cs_1^+$ pairs with the a, b, and c axes were 71°10', 55°30', and 40°30' respectively. The temperature dependence of the EPR spectrum shows a phase transition of λ -type at 44±5°K. Confirmation of the type of phase transition will require studies of the temperature behavior of EPR spectra of isostructural crystals. The authors thank T. B. Bogatov for growing the crystals.

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USSR

UDC 534.84

LEBEDEV, V. M., ABDULRAGIMOV, R. G.

"Acoustics of an Opera and Ballet Theater in Baku"

V sb. Materialy Nauchn. konferentsiya molodykh nauchn. rabotn. NII stroit. fiz. Gosstroya SSSR. Otd. inform.-izdat. i patentno-litsenz. raboty, 1970
(Materials of the Scientific Conference of Young Scientific Workers of the Scientific Research Institute of Structural Physics of Gosstroy USSR. Department of Information-Publishing and Patent-Licence Work, 1970 -- Collection of Works), Moscow, 1970, pp 76-79 (from RZh-Fizika, No 12(II), Dec 70, Abstract No 12Zh854)

Translation: The hall has a volume of 9100 m^3 and is designed for 1200 seats and has good acoustics. Measurements were made of the reverberation time in an empty and half-full hall and also with a closed fire curtain. The measurements were conducted in the frequency range 125 Hz - 6 kHz and showed that the hall has a high reverberation time (2.2 sec). The distribution of the stationary signal level over the hall was measured and the level of first reflections was calculated for certain points. A concentration of sound along the longitudinal axis of the hall was observed. I. L.

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USSR -

UDC 62-83

ABDULOV, N. A., USSR Author's Certificate No 296203, Filed 5/11/68,
Published 9/04/71.

the contact switch is on the VR. The motor, due to the residual emf resulting from its rotary inertia, is switched to the generator mode. The voltage which it generates drops to zero over a given period of time. The period of time during which the voltage drops to 30% of its nominal value is sufficient for self-starting of the M and normal operation of the VR. When the M is disconnected from the line, there is a time delay of the operation of the VR. During this time, if the voltage is restored to the line, the motor is self-started, since the "start" button is shunted during this time by the closed contact.

USSR

UDC 62-83

ABDULOV, N. A.

"Device for Automatic Reconnection"

USSR Author's Certificate No 296203, Filed 5/11/68, Published 9/04/71, (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, 1971, Abstract No 11 A229 P).

Translation: There are well-known devices for automatic reconnection of an asynchronous electric motor (M), containing a contactor, button station, and additional voltage relay (VR). These devices do not provide automatic change of the self-start delay time of the M. The device described differs from known devices in that an additional VR is connected to the terminals of the two phases of the M through a rectifier, a variable resistor, and a circuit breaker, providing automatic change in the delay time of self-starting of the M. An asynchronous M is started by pressing the "start" button, at which time the coil of the contactor, receiving power, turns on the M. The contactor shunts the "start" button with its closed contact, and opens the VR circuit with its opening contact. Thus, during normal operation of the M the relay, rectifier, and variable resistor do not participate in operation of the circuit. In case of a power failure, when the contactor is disconnected,

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2/2 017

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113410

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AMINE CONTENT OF VOLATILE SUBSTANCES OF 4 AND 10 MONTH OLD RUSSIAN CHEESE, STORED AT NEGATIVE 3DEGREES AND 85-7PERCENT HUMIDITY, WAS ANALYZED BY GAS LIQ. CHROMATOG. THE TOTAL AMT. OF AMINE CHLOROHYDRATES IN 500 G CHEESE INCREASED FROM 23 TO 29.4 MG. THE QUAL. COMPN. OF THE 21 IDENTIFIED AMINES DID NOT CHANGE SIGNIFICANTLY BUT THE AMTS. OF PIPERIDINE (I) AND ALPHA PICOLINE (II) INCREASED FROM 0.4 TO 15.4 AND FROM 7.5 TO 52.4PERCENT, RESP., AND THAT OF PRIMARY, SECONDARY, AND TERTIARY AMINES DECREASED. THE CONTENTS OF I, II, PYRIDINE AND ET SUB3 N WERE DETD. FACILITY: -INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--AMINES IN VOLATILE SUBSTANCES OF RUSSIAN CHEESE -U-
AUTHOR-(04)-GULOVNYA, R.V., ZHURAVLEVA, I.L., MIRONOV, G.A., AGDULLINA,
R.M.
COUNTRY OF INFO--USSR A
SOURCE--MOLOCH. PRM. 1970, 31(2), 8-11
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PROCESSED ANIMAL PRODUCT, FOOD ANALYSIS, AMINE, CHROMATOGRAPHY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0519 STEP NO--UR/0333/70/031/002/0008/0011
CIRC ACCESSION NO--AP0113410
UNCLASSIFIED

USSR

UDC: 517.82

ABDULLIN, V. N. (Kazan')

" n -Dimensional Riemannian Spaces Permitting Covariantly Constant, Symmetric, General Type Tensors" (Part II)

Kazan', Izvestiya Vysshikh Uchebnykh Zavedeniy Matematika, No 6, 1970, pp 3-15

Abstract: This is a continuation of the author's previous work. In this fourth stage, the author determines the types and properties of the $(d_{ik}^{(k)})$ array of matrices which makes it possible to extract a full system of differential equations for components of the g_{ij} metric tensor and to integrate it: i.e., find the metric g_{ij} and the kps of the tensor T_{ij} . Supporting theorems (4 and 5) are given with proofs. Integration starts from power functions with whole positive exponents. This study is related to differential geometry. The author expresses his gratitude to the participants of the Geometry Seminar at Kazan' University and to A. P. Norden, A. P. Shirokov, and V. V. Vishnevskiy in particular for their kind assistance. Original article: six tables, 56 formulas, and ten bibliographic entries.

ABDULLIN, K. D.

SO: JPRS 54740
30 DEC 71

UDC: 614.1:312.2-053.2 (049.3)

ABOUT THE METHOD OF COMPUTING THE INDEX OF INFANT MORTALITY

(Article by K.D. Abdullin, Chair of Social Hygiene and Public Health Organization (headed by Professor A.A. Avdeyev), Kirgiz Medical Institute, Moscow, Sovetskoye Zdravookhraneniye, Russian, No. 11, 1971, submitted 27 May 1971, p. 33)

In the article in question, the authors propose to use one-fifth and four-fifths instead of one-third of infants born in the preceding year and two-thirds of those born in the current year in computing infant mortality in accordance with the conventional method. M.Kh. Vakhitov and V.Yu. Al'bintskiy cite some convincing data in favor of the proposed computation method.

The article was discussed at a theoretical conference on our chair with the participation of a number of administrators of practical public health institutions in the republic. The unanimous view was expressed to support the corrections proposed by M.Kh. Vakhitov and V.Yu. Al'bintskiy when computing infant mortality. The data referable to Kirgiziya speak in favor of such correction.

In the last 30 years (1940-1969) there has been a six-fold decline in infant mortality in urban areas of the republic. Within the same period of time older infant mortality (from one month to one year of age) became seven times lower and neonate mortality only 2.1 times lower. This was due to the increase in number of infants up to one month of age in relation to the total child mortality; it rose from 12.8 percent in 1940 to 29.1 percent in 1969, and as a result, in the late 1960s, the share of infants born in the preceding calendar year constituted 19-23 percent among all deaths that year up to one year of age.

With reference to the article by M.Kh. Vakhitov and V.Yu. Al'bintskiy, entitled "A Method of Computing the Infant Mortality Index" published in Sovetskoye Zdravookhraneniye, No. 4, 1971.

2/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AP0119557
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NAPHTHENIC ACIDS, ESTERIFIED WITH
MONO AND DIHYDRIC ALCS., YIELDED ESTERS WITH FLASH POINT 156-94DEGREES
AND VISCOSITY INDEX 110-20. GLYCOL ESTERS WITH MOL. WT. 400-500 HAD
VISCOSITY AT 100DEGREES 7.8-8.1 CST. VISCOSITY INDEX 78-90, AND FREEZING
TEMP. MINUS 32 TO MINUS 38DEGREES. TRIETHYLENE GLYCOL ESTERS HAD THE
HIGHER LUBRICATING INDEXES. FACILITY: INKHP, BAKU, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--PREPARATION OF SYNTHETIC OILS. NAPHTHENIC ACID ESTERS -U-
AUTHOR-(03)-KULIEV, R.SH., SADYKHOVA, B.A., ABDULLAYEVA, Z.A.
COUNTRY OF INFO--USSR
SOURCE--NEFTEPERERAB. NEFTEKHIM. MOSCOW, 1970, (2), 42
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, CHEMISTRY
TOPIC TAGS--LUBRICATING OIL, FREEZING, FLUID VISCOSITY, FUEL FLASH POINT,
ETHYLENE GLYCOL, ESTER, NAPHTHENIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0645 STEP NO--UR/0318/70/000/002/0042/0042
CIRC ACCESSION NO--AP0119557
UNCLASSIFIED

USSR

UDC 575.21

MUSAYEV, M. A., ~~ABDULLAYEVA, T. Yu.~~, and YEGIAZAROV, V. V., Azerbaydzhan
Scientific Research Institute of Vegetable Growing, Baku

"Mutagenic Effect of Laser Radiation on Tomatoes"

Kiev, Tsitologiya i Genetika, No 3, 1971, pp 207-208

Abstract: Tomato shoots with roots less than 4 mm long were exposed to a LG-55 gas laser (continuous-operation type, working frequency 6328 Å) for 5, 15, 30, and 45 min. Preparations were stained with luminescent dyes to study the cytogenetic effects of irradiation. The number of chromosome aberrations increased steadily with the length of exposure. The sharpest rise occurred after the 15 min exposure. This was followed by a "plateau," possibly because of a protective mechanism. Some of the seeds from the exposed plants were planted at the same time as control seeds to compare the biological and morphological characteristics of the shoots. Even before reaching the transplant stage, the experimental plants lagged significantly in growth and development regardless of the dose used. Experimental plants also exhibited abnormally shaped flowers, slower rate of setting fruit, and so forth.

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USSR

ABDULLAYEVA, R. Kh., Meditsinskiy Zhurnal Uzbekistana, No 6, 1972, pp 3-14

are well below the required standards. There is no regular collection of trash in many communities, and as a result unauthorized dumping places can be observed in many towns and cities. Unsanitary conditions exist at food processing plants, meat packing plants, public eating places, etc. Apartment and one-family houses in most of the cities lack required sanitary conditions. The personal hygiene of many inhabitants of Uzbekistan can stand some improvement also. Stronger enforcement laws are needed to punish those who do not obey the basic principles for the protection of the environment. The steps necessary to solve many problems in sanitary and environmental engineering are outlined. The main task of improvement should be carried out by local governments in oblasts, rayons, cities, towns, villages, and settlements.

USSR

ABDULLAYEVA, R. Kh., Deputy Chairman of the Uzbek SSR Council of Ministers

"Measures for Further Improvement of Sanitary and Epidemiological Conditions in the Uzbek SSR"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 6, 1972, pp 3-14

Abstract: A long list of shortcomings in the life of people in Uzbekistan with respect to health and to the maintenance of a healthy environment is presented. The main problem which needs immediate attention is the water supply of communities, in order to control infectious diseases and cholera in particular. Construction of new water supply lines for rapidly growing cities and settlements is well behind the projected goal. Many villages and small communities do not have any sanitary water supply systems, and water in many places is polluted by toxic chemicals (insecticides, herbicides) which are widely used in agriculture. Many kolkhozes and sovkhozes do not follow safety rules in storing toxic chemicals. Industrial polluted wastewater is released into streams, rivers, and lakes without adequate treatment. Many communities do not have sanitary sewer systems. Industrialization of Uzbekistan polluted both the air and water without regard to the rapid growth of population. The sanitary conditions of city streets, industrial plants, public places (movie-houses, theaters, clubs, libraries, etc.), schools, offices, and other places

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USSR

ABDULLAYEVA, N. S., LBOV, G. S.

"Selection of Significant Characteristics for Diagnosis of Congenital Heart Defects"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 51, Tashkent, 1972, pp 88-93 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V717, by the authors).

Translation: A method of random search adapted for the M-220 computer is used to develop the most informative characteristics for recognition of certain types of congenital heart defects.

USSR

ABDULLAYEV, V. M., Azerbaydzhanskiy Meditsinskiy Zhurnal, Vol 47, No 6, Jun 70, pp 16-20

symptoms subsided. In the third series of tests with 15 rabbits after irradiation of both eyes one eye of each rabbit was treated with 10 percent ammonia solution to observe the combined effects of irradiation and the chemical. All symptoms were more pronounced in the eyes subjected to both treatments and recovery took place more slowly.

In the fourth test series, both eyes of the test animal were irradiated and then treated with the chemical. Some of the animals perished. Pronounced changes took place in the eyes; however, these were not of equal magnitude in both eyes. Secondary infections, such as various inflammations, were observed. The recovery period begins at the end of the fourth week and lasts through the sixth and seventh weeks.

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Burn Studies

USSR

UDC 616-001.28-092.9:611.84-018

ABDULLAYEV, V. M., Professor, Institute of Roentgenology and Radiology, Ministry of Health, Azerbaydzhan SSR

"Pathomorphological Changes in the Eyes of Irradiated Animals With Chemical Burns"

Baku, Azerbaydzhanskiy Meditsinskiy Zhurnal, Vol 47, No 6, Jun 70, pp 16-20

Abstract: Four series of experiments were run: in the first series 100 eyes of 55 rabbits were studied for morphological changes after a single exposure to radiation in a dose of 798 r for 42 min. Clinical as well as hematological radiation injuries were observed after the eighth day. Parabiomicroscopic and ophthalmological studies indicated the presence of photophobia, lacrimation, hyperemia conjunctivitis of the eyelid and eyeball, and edema of the cornea. In some cases, infiltration and ulcer of the cornea were observed. The first test series showed profound changes in the irradiated eye. In the second test series with 15 rabbits, the effect of chemical burns (caused by 10 percent NH_4OH) on the eye was studied. Within the first minute after exposure to the chemical, hyperemia, conjunctivitis of the eyeball and eyelid were observed. Subsequently, the animals could hardly open the eyelids. After 1-2 weeks the

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ABDULLAYEV, S. V., Vopr. kibernet. i vychisl. matem., Tashkent, "Ma",
1969, No 30, pp 118-126

on the surface of the cylinder. The parameters of the motion attenuate at infinity. Under the assumption that the shear modulus of the elastic medium is a power function of distance and the density of the material is a constant, the solution of the problem is constructed with the aid of a one-sided Laplace transformation in time. The index of the Bessel functions are then a function of the index of the homogeneous medium. Reversal of the images obtained is then fulfilled for an index equal to an integer plus one-half. An exact solution of the problems is obtained for a linear and exponential law of the motion of cylinders. The computational results are given in the form of graphs and illustrate the effect of inhomogeneity on the components of the stress-deformation state of the medium. P. F. Sabodash.

USSR

UFG 533.3:534.131.1

ABDULLAYEV, S. V.

"On the Motion of Cylinders in an Inhomogeneous Elastic Medium"

V sb. Vopr. kibernet. i vychisl. matem. (Problems of Cybernetics and Computer Mathematics -- Collection of Works), Tashkent, "Fan", 1970, No 30, pp 118-126 (from RZh-Mekhanika, No 5, May 70, Abstract No 5V194)

Translation: The problem of the rotational and translational motion of an infinite circular absolutely solid cylinder of finite radius in an infinite linearly elastic inhomogeneous isotropic medium is solved in the linear approximation. Displacements and deformations are assumed to be small. The wave motion in the homogeneous medium surrounding the cylinder is excited by the sudden longitudinal-translational motion of the cylinder in the direction of its generatrix or by the rotational motion along its axis. The problem is one-dimensional. The equations describing one-dimensional motion of the elastic inhomogeneous medium are integrated in a region outside the cylinder under null initial conditions. Conditions of "rigid contact", particles touching the surface of the cylinder move along with it, are fulfilled

2/2 014

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0133552

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RADIATION SCATTERING IS THEORETICALLY STUDIED OF NEUTRINOS BY LEPTONS (NAMELY E PRIME NEGATIVE), THE POLARIZATION OF PARTICLES BEING TAKEN INTO ACCOUNT. EXPLICIT EQUATIONS ARE FOUND FOR DIFFERENTIAL CROSS SECTION OF THE SCATTERING PROCESS, ANGULAR AND ENERGY DISTRIBUTION OF E, AND DEGREE OF BOTH CIRCULAR AND LINEAR POLARIZATION OF GAMMA-QUANTUM. FACILITY: AZERB. GLSUNIV. IM. KIROVA, BAKU, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--RADIATION SCATTERING OF NEUTRINOS BY LEPTONS -U-
AUTHOR-(03)-MLKH TAROV, A.I., KADZHAFOV, I.M., ABDULLAYEV, S.K.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCH. ZAVED., FIZ. 1970, 13(4), 69-73
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--SCATTERING CROSS SECTION, PARTICLE INTERACTION, NEUTRINO,
ELECTRON INTERACTION, ANGULAR DISTRIBUTION
CENTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FKAME--3005/1647 STEP NO--UR/0139/70/013/004/0069/0013
GIRC ACCESSION NO--AT0133552
UNCLASSIFIED